Transmission Charging Methodologies Forum and CUSC Issues Steering Group

Meeting 99

11 December 2019

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Welcome

Jon Wisdom

National Grid ESO

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Agenda

1	Introduction, meeting objectives	**Jon Wisdom NGESO**	10.30 – 10.35
2	RIIO-2 update	**Russell Fowler NGESO**	10.35 – 10.50
3	Queue management and interactivity	**Sarah York NGESO**	10.50 – 11.00
4	Accelerated Loss of Mains Change Programme	**Stephen Marshall NGESO**	11.00 – 11.15
5	TCR update	**Harriet Harmon NGESO**	11.15 – 12.15
6	Code modifications update	**Paul Mullen NGESO**	12.15 – 12.25
7	AOB	**Jon Wisdom NGESO**	12.25 – 12.30

Introduction and meeting objectives

No open actions

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ESO RIIO-2

Russell Fowler, NGESO

December 2019

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Creating value for consumers

We published our RIIO-2 Business Plan on 9th December

£2 billion net consumer benefits in RIIO-2

£3 annual saving on each consumer bill in RIIO-2

Our Business Plan

Part 1: Context

- Introduction and context
- Assumptions underpinning our plan
- A plan informed by our stakeholders
- Facilitating the transition to a net-zero energy system

Part 2: Our proposals

- Reliable and secure system operation, to deliver energy when consumers need it
- Transforming participation in smart and sustainable markets
- Unlocking consumer value through competition
- Driving towards a sustainable, whole energy future
- Open data

Part 3: Setting the ESO up for success

- Financing our plan
- Technology underpinning our ambition
- Innovation at all levels of the business
- People culture and capability

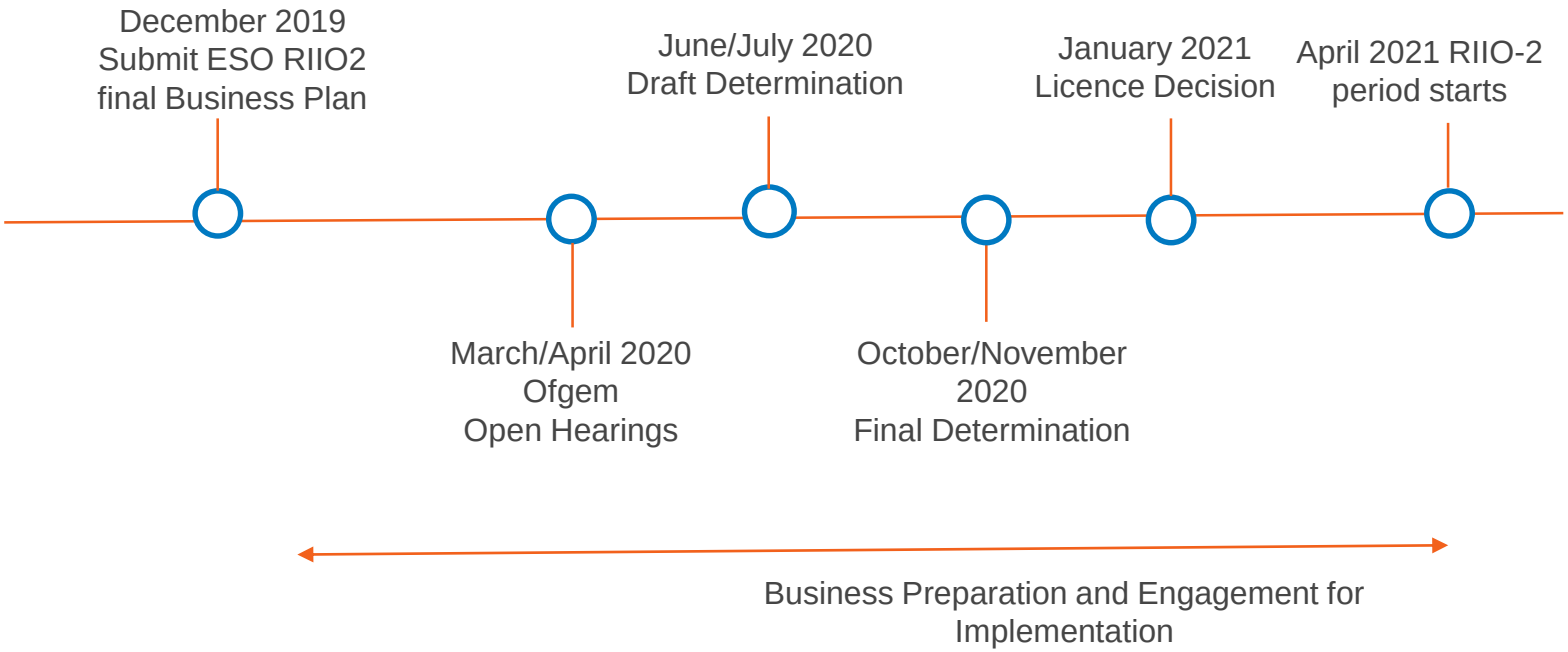
Theme 2: Develop codes and charging arrangements that are fit for the future

- Transform the process to amend the codes we administer, allowing strategic change to be prioritised and implemented efficiently, while ensuring that it is much simpler and less time consuming to make incremental improvements
- Work with all stakeholders to create a fully digitalised whole system Grid Code by 2025
- Fully or partially fix one or more components of Balancing Services Use of System (BSUoS) charges to provide more stability for our customers, if this is in the best interests of consumers

What have Stakeholders said?

- Stakeholders have consistently told us codes are not fit for purpose and would welcome significant improvement in this area but would like us to be mindful of the ongoing review by BEIS and Ofgem

What's next?



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Queue management & interactivity

Sarah York, NGESO

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TCMF Dec 19

Accelerated Loss of Mains Change Programme (ALoMCP)

Stephen Marshall, NGESO

11th December 2019

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Update – Dec'19

Context

- The programme is incentivising the replacement / setting change of relays and invertors at c50k small generation sites across the UK, ahead of the new ROCOF settings being mandatory from Sep'22
- Generators are paid a fixed fee towards the cost of this work, if their application is accepted by NGESO
- £100m will be recovered against BSUoS over 2 years commencing 9th Oct'19, with £14.4m recovered over the remainder of FY19/20
- BSUoS charging for ALoMCP will be done against a forecast as opposed to actual cash outflow to minimise cost volatility to BSUoS payers
- The forecasts will be reviewed quarterly and refreshed in line with the speed of roll-out and to reflect any under/over-recovery
- The 1st application window opened on 2nd October and closed on 12th November

Progress

- We received c2.5k applications (c5.5GW) in the 1st window, and are currently assessing which to accept
- The ALoMCP Steering Group had it's inaugural meeting on 27th November with representatives from DNOs, Generators, BSUoS payers & Ofgem – providing direction on budget & acceptance of 1st window applications (requesting rejection of any applications with a completion date beyond 18mths out)
- Once we have agreed successful applications and completion dates, we will be in a position to re-assess likely cost out-turn for the near-term, from which to re-forecast the 2020 recovery profile

Next steps

- We will revise the Q1'20 recovery profile to reflect the outcome of this assessment
- A fuller picture of 1st window acceptances will be provided alongside explanation of the Q1'20 re-forecast at January's TCMF

Targeted Charging Review (TCR) update

December 2019

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Contents

- Overview
- Ofgem's TCR decision
- TCR direction and modifications:
  - TNUoS Demand Residual (TDR)
  - TNUoS Generator Residual (TGR)
  - BSUoS Reform
- Modification timeline

Overview

Ofgem's Aims

- Remove harmful distortions in current charging methodology
- Create level playing field
- Make charging fairer for all users of the network
- Meet interests of current and future consumers
- Continue reviewing 'embedded benefits' that may distort investment or dispatch decisions

Decision Made by Ofgem - 21st November

Ofgem's TCR Decision

Reform of TNUoS Demand Residual

Removal of TNUoS Generator Residual

Reform of BSUoS charge

2nd BSUoS taskforce

To be implemented at transmission by April 2021 and distribution by April 2022

Ofgem's TCR Direction

Ofgem have directed NGESO to implement their decision

NGESO are raising the following modifications;

1. Modification to design and implement a new methodology for Transmission Demand Residual– to be raised before Christmas.
2. Set Transmission Generator Residual to £0 and align with CMP317 (CMP327).
3. Revise BSUoS methodology to be based on 'Gross' demand

   Modifications to other codes (BSC and DCUSA) also expected

The above modifications need to be raised as urgent to meet Ofgem's implementation date of April 2021

TNUoS Demand Residual (TDR)

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TNUoS Demand Residual (TDR)

Problem

- The residual charge is not designed to provide a signal
- Today some users are able to adjust their demand to avoid paying almost all residual charges

Solution

- Demand residual to be charge at a fixed rate
  - Non-domestic user charges to be banded based on voltage, capacity or demand where relevant
  - Users to remain in band for duration of price control
  - Domestic users to be charged single tariff

How the TNUoS Demand Residual (TDR) could be calculated

The potential process for determining TDR;

(A)	TO MAR (£)	-	Generation TNUoS Value (£)	+	Embedded Export Tariff (£)	=	Demand TNUoS Value (£)	
(B)*	Zonal HH tariffs (£/MW)	x	Zonal gross peak demand (MW)	=	Expected Zonal revenue (£)			
(C)*	Zonal HH tariffs (£/MW)	x	Zonal Triad demand (MW)	=	Recovered HH Zonal Value (£)			
(D)*	**(B)**	-	**(C)**	=	"NHH Zonal Recovery Value" (£)			
(E)*	**(D)**	÷	NHH Chargeable Zonal Volume (MWh)	=	NHH Locational Tariff (£/MWh)			
(F)	**(A)**	-	**Σ(C)**	-	**Σ(D)**	=	TDR Value (£)	

(G) Take (F) and apply a methodology to spread value across bandings → 8 'usage groups' 4 percentiles = ~18-21 tariff bands

1. Domestic
2. LV no defined capacity
3. LV defined capacity
4. High Voltage
5. Extra High Voltage
6. Transmission

a. <40th percentile
b. =>40th percentile < 70th percentile
c. =>70th percentile <85th percentile
d. =>85th percentile

Convert banding values into tariffs (p/day)

* Step run for each zone

How could it be apportioned?

Total Domestic Volume as a percentage of national volume = x%

X% of Residual = £ym

£ym/number of Domestic sites/days = £z/site/day

Specified in the Direction – it could be HVBand1 volume as a %age of total national rather than HV as a %age of national

Total HV annual volume as a percentage of national volume = a%

a% of Residual = £bm

Total HV Band1 consumption as a percentage of total HV volume = c%

c% of £bm = £dm

£dm/number of HVBand1 sites/days = £e/site/day

Proposed approach to banding

Proposed common definition of Site and Final Demand across Tx and Dx:

1 MPAN = 1 site unless otherwise proven

Final Demand = all demand unless otherwise proven

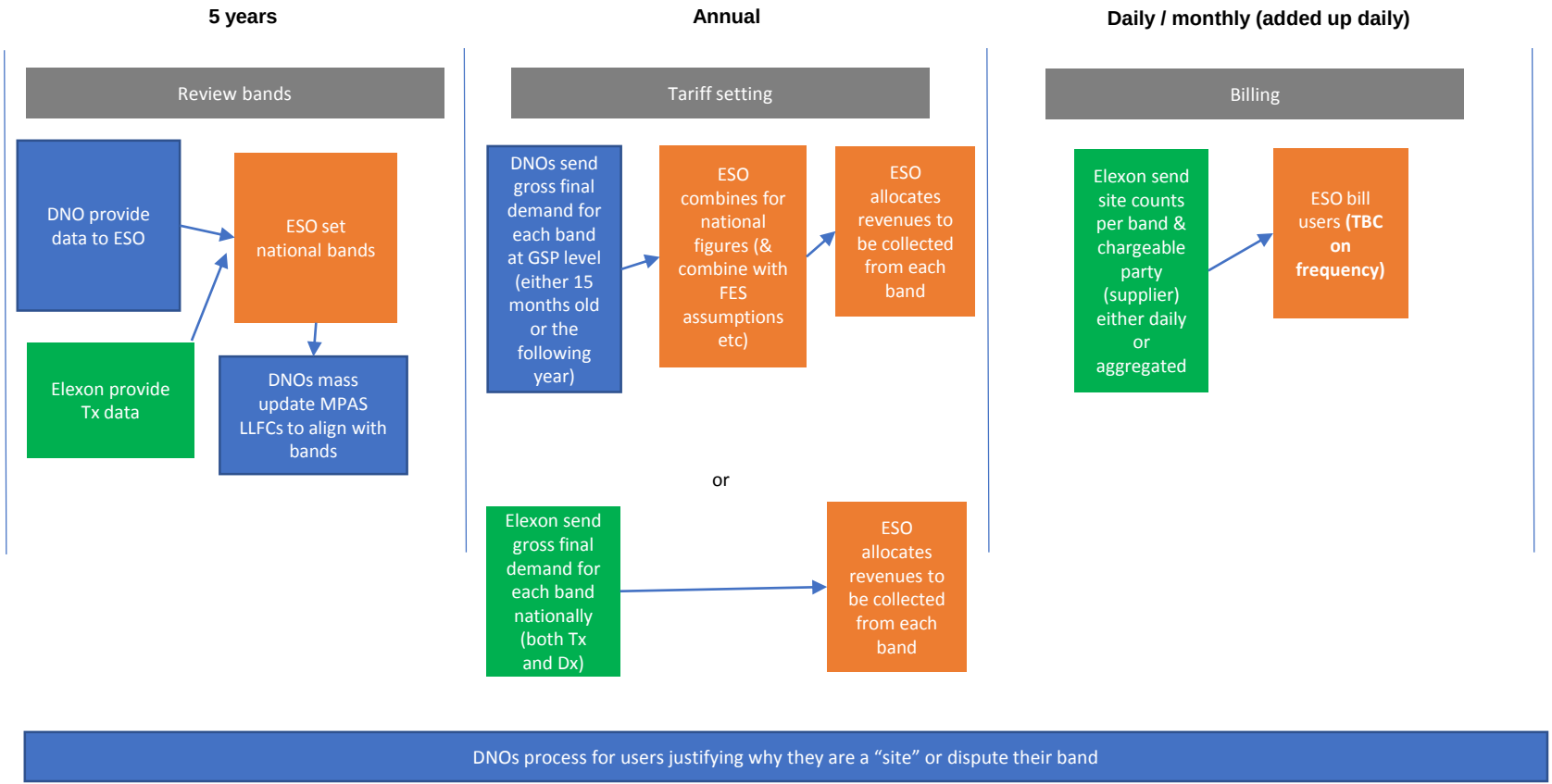
DNOs to provide ESO with site count and final demand MWh

ESO to set national bands at percentiles

DNO to assign sites to bands using LLF

DNOs, Suppliers, DAs, Elexon to establish processes and flows for non-final demand and appeals process (appeals to DNO only)

DRAFT RUNNING ORDER/PLAN OF DATA SHARE FOR TDR



TDR Modification

This modification will update the current methodology by;

1. Using the concepts of ‘Final Demand’ and ‘Single Site’
2. Creating charging bands for TDR based on the methodology in Ofgem’s decision
3. A new methodology to split TDR cost to these bands based on Final Demand at Single Sites
4. A process for a periodic review of the TDR methodology

- Modification is still in development but will be raised before Christmas
- Likely to be raised as urgent due to pressing timescales

TNUoS Generation Residual (TGR)

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TNUoS Generator Residual (TGR)

Problem

- The Transmission Generator Residual charge is currently negative to ensure compliance with EU Regulation 838/2010. Ofgem have directed that the TGR should be set to zero and that generators should face all applicable charges.
- The CUSC should also properly reflect the correct interpretation of the “connection exclusion”.

Solution

- Transmission generation residual charges to be set to zero
  - ESO must remain compliant with regulation 838/2010, which states TNUoS recovery from Generator Users must be in the €0-2.50/MWh range (excluding ‘assets required for connection’)
  - Must be carried out alongside current modification CMP317

We have raised a modification (CMP327) as urgent which the CUSC Panel have agreed to run with CMP317. This now awaits Ofgem confirmation.

BSUoS Reform

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BSUoS Reform

Problem

- Smaller Distributed Generation and exporting on-site generation can receive payments for reducing suppliers' liabilities for balancing service charges
  - Non-exporting on-site generators can receive these same benefits
- Smaller Distributed Generation and on-site generation does not currently pay generation balancing services charges

BSUoS Modification

Currently BSUoS to Suppliers is calculated on a ‘net’ basis;

$$BSUoSTOT_{ij} = \frac{BSUoSTOT_j * QMBSUoS_{ij} * TLM_{ij}}{\left\{\left|\sum^{+}(QMBSUoS_{ij} * TLM_{ij})\right| + \left|\sum^{-}(QMBSUoS_{ij} * TLM_{ij})\right|\right\}}$$

Where:

$BSUoSTOT_j$	Total BSUoS Charge applicable for Settlement Period j
$QMBSUoS_{ij}$	BM Unit Metered Volume (QM_{ij})** for BSUoS Liable BM Units
TLM_{ij}	Transmission Loss Multiplier **

$\sum^{+}$ - refers to the sum over all BM Units that are in delivering Trading Units in Settlement Period ‘j’

$\sum^{-}$ - refers to the sum over all BM Units that are in offtaking Trading Units in Settlement Period ‘j’

- So currently; $QMBSUoS_{ij}$ = Demand Volume – Embedded Generation Volume
- BSUoS Methodology is detailed in CUSC section 14.30

The modification will change this calculation so it is run on a ‘gross’ basis

BSUoS Reform

Solution

- Modification to state suppliers to be charged BSUoS on a ‘gross’ basis
- Set up 2nd BSUoS taskforce to look at who should pay and how

Deliverable	Date
Consideration and assessment based recommendation as to who should pay balancing services charges.	January – February 2020
Investigation and recommendation for recovering balancing services charges, including collection methodology and frequency.	February - March 2020
Produce an interim report providing detailed reasoning and any relevant analysis behind the conclusions.	April 2020
Consult on the interim report providing opportunity for stakeholder comment.	April - May 2020
Issue a final report including consideration of stakeholder consultation responses providing a final recommendation on who should pay, the design of balancing services charges and potential timescales for implementation.	June 2020

To be followed by further modification(s) as necessary

Other TCR related modifications

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Other changes required for TCR

In addition to the detailed methodology changes we expect there to be additional modifications to the CUSC for:

- Billing and reconciliation
- Credit cover and forecasting requirements
- Definitions

Changes to other codes:

- Data requirements for single site and final demand
- Alignment of banding definitions
- Appeals process for band changes within a price control

Modification timeline

Modification	When
TGR to Zero – CMP 327	Raised at November's panel
TDR CUSC methodology changes	To be raised in December
BSUoS charged on 'gross' basis	To be raised in December
BSUoS taskforce	Starting in January
Additional changes required for TCR	TBC to be aligned with DNO plan

Code Administrator Update

Paul Mullen

National Grid ESO

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Authority Decisions/Implementations – November and December

Modification Number	What is this Modification doing	Decision/ Implementation
CMP295	Putting in place contractual arrangements for Virtual Lead Parties (Project TERRE)	Implemented 6 December 2019
CMP321	Clarify the definition of 'Affiliate' within Section 11 of the CUSC as a result of CMP285 implementation.	Implemented 12 November 2019
CMP318	To extend the period over which Meter Point Administration Numbers (MPANs) in Measurement Classes F and G are treated as NHH for Transmission Network Use of System (TNUoS) charging purposes	Decision 11 November 2019, to be implemented 1 April 2020

Authority Decisions – Pending

Modification Number	What is this Modification doing	Decision/ Implementation
CMP280, CMP281 and CMP319	Remove the liability from storage facilities to the TNUoS Demand Residual tariff element (CMP280) and BSUoS charges on imports (CMP281). CMP319 raised to carry out changes to the CUSC definitions as a result of CMP280 and CMP281.	Due 19 November – expected in January 2020
CMP292	Looking to ensure that the charging methodologies are fixed in advance of the relevant Charging Year to Electricity System Operator to appropriately set and forecast charges.	Due 20 September – expected in January 2020
CMP303	To make part of the TNUoS charge more cost-reflective through removal of additional costs from local circuit expansion factors that are incurred beyond the connected, or to-be-connected, generation developers' need.	Due 16 December – expected in January 2020
CMP306	Align the rate of return applied to the net asset value of connection points in the calculation of annual connection charges to the pre-tax cost of capital in the price control of the Relevant Transmission Licensee (plus a margin of 1.5 percentage points in the case of MEA-linked assets).	Due 19 December – expected in January 2020

New Modifications

Modification Number	What is this Modification doing	Panel Decision
CMP327	Change the TNUoS Charging Methodology such that the Residual element of Generator TNUoS is £0 and ensure that the correct interpretation of EU Regulation 838/2010 is incorporated	Will need Workgroups and Ofgem decision. Recommended Urgency and amalgamation with CMP317 Proposal (both subject to Ofgem Approval)
CMP328	This modification proposes to put in place an appropriate process to be utilised when any connection triggers a Distribution impact assessment.	To be presented at December Panel on 13 December
CMP329	To amend incorrect references to National Grid Electricity Transmission Plc to National Grid Electricity System Operator in the CMP295 legal text.	To be presented at December Panel on 13 December
CMP330	To amend the definition of Connection Assets in section 14 of the CUSC to allow cable and overhead line lengths over 2km to be contestable where agreed between the Transmission Owner and the User.	To be presented at December Panel on 13 December
CMP331	To provide new generators with the option to replace the generic Annual Load Factors (ALFs) used to determine their TNUoS charges with a site-specific ALF.	To be presented at December Panel on 13 December

In Flight Modification Updates

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In flight Modifications

For updates on all “live” Modifications please visit
https://www.nationalgrideso.com/document/157806/download

2020 Dates

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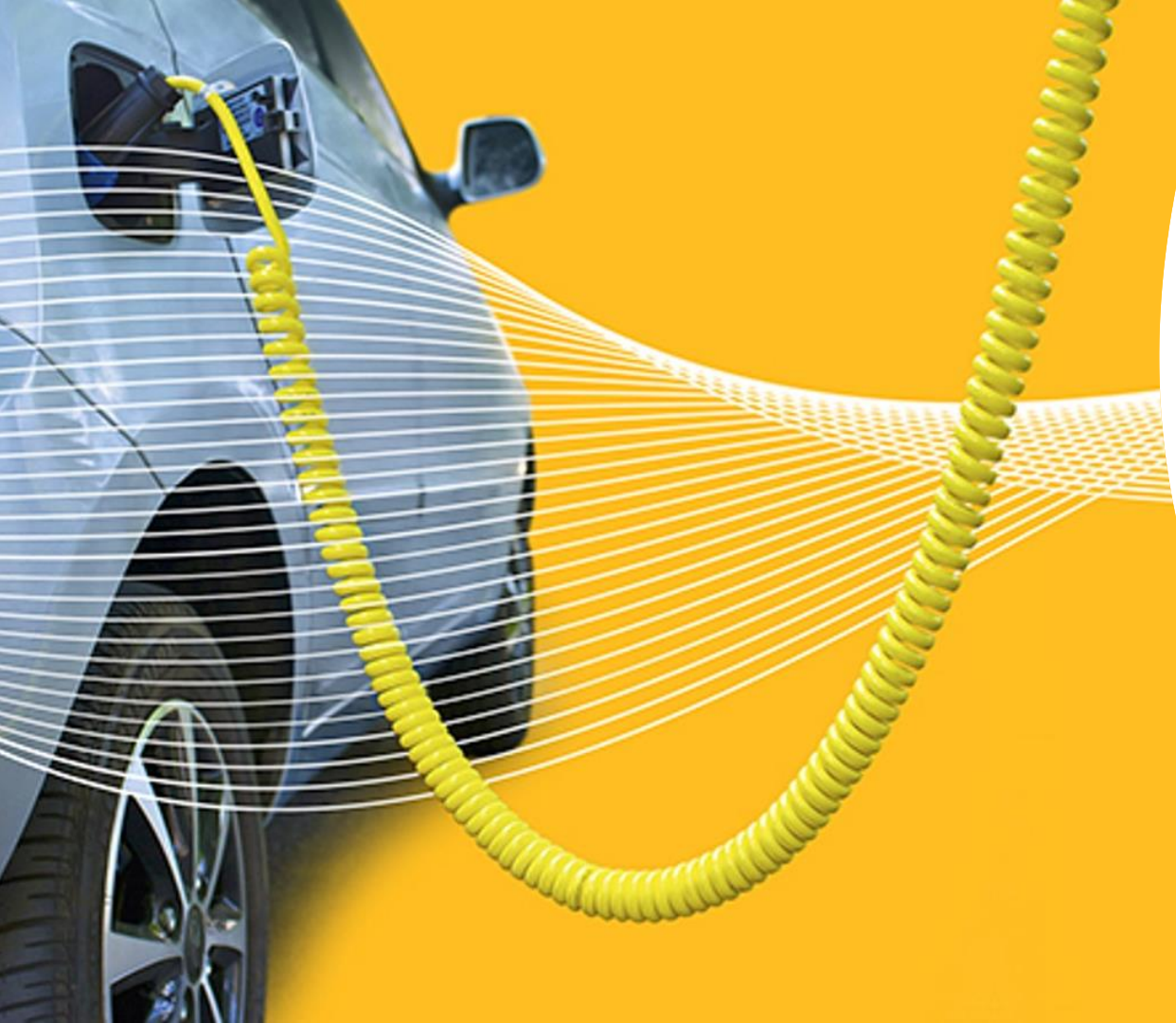
CUSC 2020 Workgroups and Panel dates

CUSC - Workgroups	1	2	3	4
March	6	12	20	26
April	3	9	15	23
May	8	14	22	28
June	5	10	15	25
July	10	16	24	30
August	7	13	21	27
September	4	10	18	24
October	9	14	23	29
November	6	11	16	23
December	30/11	7	17	21

CUSC	Panel Dates	Papers Day	Modification Submission Date	TCMF
January	31	23	16	9
February	28	20	13	6
March	27	19	12	5
April	24	16	9	2
May	29	21	14	7
June	26	18	11	4
July	31	23	16	9
August	28	20	13	6
September	25	17	10	3
October	30	22	15	8
November	27	19	12	5
December	18	10	3	26/11



Questions & AOB

Jon Wisdom
NGESO

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